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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JULIET C. KRAAL and DANIEL ARBITTER

Appeal 2007-3063
Application 09/630,918
Technology Center 2100

Decided: March 7, 2008

Before JOSEPH L. DIXON, LANCE LEONARD BARRY, and
ALLEN R. MACDONALD, *Administrative Patent Judges*.

MACDONALD, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

This is an appeal under 35 U.S.C. §§ 6(b) and 134(a) from the Final Rejection of claims 1-6 and 8-20.

Claim 1 is exemplary:

1. A system for subjective evaluation of a vehicle design within a virtual environment using virtual reality comprising:

a scaleable physical property representative of the vehicle design, wherein the physical property is adjusted according to a scale ratio for an evaluator of the vehicle design, wherein the scale ratio is a ratio between a predetermined dimension of the evaluator and a predetermined dimension of a member of a target population;

a computer system for digitally creating a virtual environment having a virtual human immersed within the virtual environment, wherein the virtual environment includes the vehicle design and the virtual human virtually represents a scaled evaluator;

a motion capture system for sensing a motion of the evaluator and communicating the sensed motion of the evaluator to the computer system, so that the motion of the evaluator controls the motion of the virtual human in the virtual environment; and

a virtual reality display mechanism operatively communicating with the computer system, for providing the evaluator a view of the virtual environment while evaluating the vehicle design.

The references relied upon by the Examiner in rejecting the claims on appeal is:

Nayar, *DENEB/ERGO- A SIMULATION-BASED HUMAN FACTORS TOOL*, Deneb Robotic, Inc., 427-431, 1995.

Purschke, *Virtual Reality-New Methods for Improving and Accelerating the Development Process in Vehicle Styling and Design*, Computer Graphics International, 1998.

All appealed claims stand rejected under 35 U.S.C. § 103 as unpatentable over the combined teachings and suggestions of Nayar and Purschke.¹

Claims 1-6

The Examiner concludes that the combination renders claims in this group obvious. Most pertinent to our analysis, Appellants allege that neither Nayar nor Purschke teaches or suggests the claimed property is adjusted of claim 1. (App. Br. 14 and Reply Br. 3.) Thus, the dispositive issue with respect claims in this group is whether Nayar or Purschke teaches or suggests that a property is adjusted.

We begin our analysis by construing the claimed “property.” Appellants’ Specification describes a “property” as a “prop that *simulates* the vehicle design being evaluated” and an example of a “physical property” includes a seat, floor, foot control, and steering wheel. (Spec. 9:7-11 (emphasis added).) Accordingly, we broadly but reasonably construe the

¹ Hereafter, the combination of Nayar and Purschke is referred to as the “combination.”

claimed “property is adjusted” as adjusting a *real-world* interactive environment.

Next, we compare the teachings and suggestions of Nayar and Purschke with the requirements of the claimed property is adjusted. Nayar teaches *simulating* interaction between a virtual person and a workplace, where the sizes of the objects and the person are both adjustable. (p. 427, section 1.3, ll. 1-8 and p. 428, section 2, ll. 8-10.) Similarly, Purschke teaches *simulating* interaction between a person and a work place or car, where the work place or car geometry and size of person are both adjustable. (Abstract, ll. 15-16; p. 9, sections 3.1 and 3.2; and fig. 13.) With regard to real-world interactive elements, Nayar teaches using various interfaces such as a glove, helmet, and eyewear to facilitate a *virtual reality* experience by a user. (p. 428, section 1.5.) Similarly, Purschke teaches a head-mount display and gloves to facilitate a *virtual reality* experience by a user. (p. 11, section 5, ll. 21-23.) The glove, helmet, and eyewear allow a user to interact with a *simulated environment* but neither Nayar nor Purschke teach or suggest adjusting the *real-world* interactivity of the glove, helmet, and eyewear. Thus, we find that Appellants have shown that the Examiner erred in finding that either Nayar or Purschke teaches or suggests the claimed property is adjusted, as recited in independent claim 1.

Accordingly, we find that Appellants have shown that the Examiner erred in rejecting claims 1-6 under 35 U.S.C. § 103(a) over the teachings and suggestions of the combination.

Other Claims

Appellants present arguments under separate headings concerning claims 8-14 and claims 15-20. With regard to claims 8-14, Appellants allege that the Examiner erred in finding that the combination teaches the claimed preparing an adjustable property of claim 8 (App. Br. 20 and Reply Br. 3) whereas with regard to claims 15-20, Appellants allege that the Examiner erred in finding that the combination teaches the claimed adjusting the property of claim 15 (App. Br. 23 and Reply Br. 3).

We construe the claimed preparing an adjustable property of claim 8 and the claimed adjusting the property of claim 15 in the same way as we construed the claimed property is adjusted of claim 1. Consequently, for the same reasons presented with regard to claims 1-6, we reverse the Examiner's rejection of claims 8-20 under 35 U.S.C. § 103(a) over the teachings and suggestions of the combination.

We acknowledge that Appellants present other allegations of Examiner error. However, because we find that Appellants have shown that the Examiner erred in finding that the combination teaches or suggests the claimed preparing an adjustable property and the claimed adjusting the property, we need not reach Appellants' other arguments to decide this appeal.

CONCLUSION OF LAW

On the record before us, we conclude that:

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(1) Appellants have shown that the Examiner erred in concluding that claims 1-6 and 8-20 are unpatentable under 35 U.S.C. § 103 over Nayar and Purschke and

(2) Claims 1-6 and 8-20 have not been shown to be unpatentable.

DECISION

The Examiner's rejection of claims 1-6 and 8-20 is reversed.

REVERSED

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